

[CONCLUDED FROM PAGE 1.]

of talk has just a little grain of truth in it. It does not hurt the young trees to be disturbed nearly as much as it does old ones, nor does it hurt them so much in late fall when the roots are frozen; but hurt them it does, and it will put any tree back from one to two seasons.

You can transplant a large, full grown tree without checking its development in one way only, and that is by digging up an enormous ball of frozen earth with the roots. The big and small roots must not be disturbed, and the ball of earth must be kept closely clinging to them. If this is done with great care gigantic elms, oaks and maples can be transplanted without causing them any apparent injury. A knowledge of this should help us in the matter of transplanting fruit trees. We should follow exactly the same directions. I have time and again transplanted young trees from the nursery in this way, and they have absolutely not lost a month's growth. Alongside of them I have planted other stock that has been shipped in the ordinary way, where the roots had been disturbed although there was an apology for a ball of earth wrapped around them.

The comparative results in the growth were such as to convince me that there is only one true and successful way to transplant young and old trees. Dig them up in the fall of the year when the ground is solid, and leave a ball to their roots equal in diameter to their longest roots. If removed carefully with this ball of earth unbroken, and planted immediately, they will lose nothing in their next season's growth.

C. W. S.

HORTICULTURE IN THE SCHOOLS.

Prof. Keffer Makes Some Suggestions to Country School Teachers.

Correspondence of The Progressive Farmer.

The most notable departure from the old-time ironclad rule of the three R's—"reading, 'riting and 'rithmetic"—is the introduction of primary lessons on fruit growing and gardening in the country schools. The movement had its origin in the extension of nature study and has taken deepest hold in New York State, though Missouri teachers have enthusiastically adopted it. Every country teacher has felt the need of some form of general exercise in which the entire school could participate. The time-honored "spelling down" is one solution of this need. Arithmetic matches, news of the week, stories from home reading—these and many similar exercises have been invented to interest all the scholars; but in everyone there is the difficulty that the primary classes cannot do the work.

Let the country teacher try gardening. A box of sand and a few seeds will tell all the children, old and young, new things of the beginnings of plant growth and of the effects of too much or too little water upon the sprouting seed. A peach twig can teach the difference between leaf and fruit buds to the smallest child in school; and it can teach the teacher the basis of good pruning for that fruit. A comparison of the fruiting wood of apple and peach has in it a good lesson, interesting and useful. The dissection of a well-grown strawberry plant will show fruit buds already formed, ready for next year's crop. How many pupils, even in the advanced classes, have seen for themselves how the young squash plant breaks from its seed?

These are matters of greater interest and value to the country boy and girl than the spelling of words they will never use, or the location of the capital of Timbuctoo. And if to sand and soil boxes in the school house window there can be added an out-of-door garden when spring time comes, the teacher will find in it a wonderful help in plant study—not botany, but just a simple study of the familiar plants of garden and orchard. Professor Bailey, of Cornell University, has published a most helpful book (*Lessons with Plants*) for teachers that is full of useful suggestions for the garden teacher. The University of Tennessee offers in the short courses which begin January 3rd special work in horticulture which is of the greatest value not only to farmers and fruit growers, but to school teachers, enabling them to work out just what is wanted for their lessons in horticulture and giving besides a good general understanding of the subject.

CHARLES A. KEFFER.

Agricultural Experiment Station, Knoxville, Tenn.

The Poultry Yard.

ADVICE TO POULTRY RAISERS.

A Sampson County Farmer Advocates Clean Hen Houses and Clean Drinking Water.

Correspondence of The Progressive Farmer. You were most fortunate in your selection of Aunt Jennie to conduct the Social Chat department of an agricultural paper. Some poet has said that:

"He that by the plow would thrive Must either hold the reins or drive." Aunt Jennie may never have "held the reins," but evidently at some period of her life she has "driven," or she could not have written as she did a few weeks ago.

I once heard an editor say that if you want to learn how to run a newspaper, ask some one who never edited one, and he can tell you all about it. Now I don't see why the principle should not apply as well to other pursuits; therefore, as my experience in poultry raising is neither varied nor extensive, I don't see why I should not give a little information about chickens. First—

FILTHY ROOSTING PLACES.

Filth breeds vermin—lice, fleas and mites; these cause diseases; therefore, if you wish to have healthy fowls keep the roosting place clean. To do this they must roost in a house, and it must be warm and dry.

They should be shut in at dark and kept in till hogs are through eating next morning. This keeps them from over-eating, and the hogs from under-eating. It keeps out rats, minks, dogs and 'possums and prevents roosting on walls, fences, roofs of buildings and under cart-shelters, where if they are allowed to roost, the plantation will soon become stocked with lice in a way that makes it impossible to get rid of them.

Have roost poles so they can be taken out at pleasure and cleaned of lice, for they are there. If you doubt it, take out one pole, turn it bottom side up and look in a crack or crevice, and you will see something that resembles a strand of red flannel. Jar it slightly and you will think it the liveliest flannel you ever saw and one that can separate into the greatest number of pieces.

There they are, and they do more harm than the gray louse, because they "come like a thief in the dark," and eat while the chicks are asleep. Then you ask, what are we to do about it? I answer, this: Clean out the house at least once a month and haul or tote the manure to the garden or some other field, and plow under. Try to arrange to plow your garden at same time you clean out; but should you wish to use it under special crops at certain seasons, put it in a box or barrel and cover. Put in small quantity of earth to prevent loss by evaporation, and you will have more manure and better manure.

At same time take out roost poles and pour kerosene oil over them; or, if you wish to avoid such expense, build a quick fire of straw, chips, &c., not too close to buildings and hold poles over it. Then use the oil on inside walls and sills, if any.

Now a word as to

THE DRINKING WATER.

Perhaps the greatest cause of disease is found in mud-holes, hog troughs and dirty streams near the house.

At every well there should be a wide bench on which to place tubs, buckets, &c. Under this place a small trough with a strip nailed over it so that chicks can put their heads under to drink, but can't get in with their feet. Clean this trough several times each week by rubbing with the hand, a cob, or mop made for the purpose. Instruct each member of the family to pour out the water at night and the first one that goes to the well of mornings must put in fresh water. Every time during the day when water is drawn and part not needed, pour this into the trough, and you will have fresh water without trouble or cost.

I have met but one man that didn't love eggs nor chicken, and he was a preacher—but not a very good one, as might have been expected.

To have eggs in winter as well as in summer, sow near the house the following: Rye, oats, turnip and mustard seeds. Plow under rye and oats and then sow the seeds and drag a brush or harrow lightly.

But don't expect the hens to lay when kept zero; keep them in warm house at night.

WM. A. BARREY.

Sampson Co., N. C.

Mention The Progressive Farmer when writing advertisers.

Farm Miscellany.

KEEPING UP COUNTRY ROADS.

In his recently published bulletin on the construction and maintenance of country roads, Prof. F. H. King, of the Wisconsin Station, says:

"With our present system of working country roads there is no possibility of either making or maintaining earth roads in first-class order. It is possible, however, to do much better than is done in many places, and one of the most fundamental changes which needs to be made, is to reserve a considerable part of the road tax each year to be worked out along the lines of maintenance on any day during midsummer, fall and early winter when it is seen that something needs to be done and when the soil is in just the right condition to permit the most effective work."

"The general practice of working out all of the road tax in the late spring and early summer makes it necessary to be nearly all of the time either making road or repairing that which is in very bad condition, and the result is that during most of the time the travel is over poor or bad roads when, if the work were more intelligently distributed through the seasons when work may be effectively done, nearly the whole labor would be devoted to correcting the slight defects and thus enabling nearly all travel to be over good or fairly good roads."

"The intelligent use of the grader and roller at the right time after the rains of a wet period and after a dry period will make marvelous changes in the character of earth roads of all classes and particularly in those which are proverbially bad."

"We cannot too strongly emphasize that to drive up one side of the road with a road machine and back on the other, scraping a lot of loose, heterogeneous rubbish and earth into the middle of the road, to be tramped out again by the traffic, is neither repairing nor maintaining the road. The material brought upon the road should be well distributed and harrowed until an even, uniform layer has been secured and then the roller should be thoroughly applied when the earth is in just the right condition to pack well. Work of this sort will count and will be appreciated."

FOR WINTER READING.

Every Farmer Ought to Use the Winter Months to Become a Better and More Progressive Farmer—Here are Some Books That Will Help You.

Principles of Agriculture. By Prof. L. H. Bailey, of Cornell University. Handsomely illustrated. 300 pages. Price, \$1.25.

We really do not believe that the average North Carolina farmer can anywhere invest \$1.25 to better advantage than by sending that amount to us for a copy of Prof. L. H. Bailey's "Principles of Agriculture." This is a work which tells the "whys and wherefores"—the principles—of the "business" of farming. It is written by a man of great ability who knows his subject by long years of actual experience and scientific study. The farmer who secures a copy of this work and studies it during his spare moments this summer will not only find much pleasure thereby, but will find greater interest in his work, a broader view of his profession and the probability of making many more dollars as a result of his study. There are many books upon the market, but not for many years, we firmly believe, has one been issued which the average reader of this paper so badly needs. The work is handsomely bound, well illustrated, clearly printed and contains 300 pages. Send us \$1.25 and get a copy. We guarantee satisfaction.

A SPECIAL PRICE.

We have now decided to send a copy of this valuable work and a year's subscription to The Progressive Farmer to any address for only \$2. This offer is made at a sacrifice in the hope of placing the work in the hands of more of the thousands who need it.

We will also send a copy of "Fertilizers," with The Progressive Farmer one year for \$1.85. Or on the two books we make this—

SPECIAL OFFER:

We will send The Progressive Farmer 1 year \$1.00
Bailey's "Principles of Agriculture" 1.25
Voorhees' Fertilizers 1.00

All for \$2.80.

Men can be cured privately and positively at home of all weakness and disease. Write for new free book. Dr. J. N. Hathaway, 22½ AC South Broad St., Atlanta, Ga.

Live Stock.

THE BLOOD OF OUR STOCK.

Correspondence of The Progressive Farmer.

There is a common saying that we live by our blood and on it, and if the blood is not pure our systems starve; if too rich we break out in disease and suffer, but if just right at all times we enjoy perfect health. This is so true that physicians try to get at the root of all diseases by purifying and feeding the blood. If this is kept in good condition and in healthy circulation most diseases will be thrown off and the system thereby will be saved many sufferings.

A good deal if not all this practical wisdom is applicable to the live stock which we raise on our farms—the cows, pigs, sheep, and poultry. The blood is the all-essential constituent that makes good or bad animals. Let that get out of order and then the door is thrown open for all sorts of physical disorders. There is hardly a disease that cannot be traced back directly or indirectly to the blood. Even the colds which the animals suffer with would never have been contracted had the blood been all right. If the blood had been pure, rich and in good circulation the animals would have been able to throw the cold off, or never to have taken it at all.

Consequently we need to pay a little attention in the winter time to feeding for blood and for all seeing that it is all right. Richness of blood sometimes means impurity, and that is not to be desired any more than impoverished blood. Animals that are shut up in close winter quarters and fed heavily on rich foods will invariably have thick, sluggish blood which may cause fevers and other troubles. Swine cholera owes its origin to feverish, thick and sluggish blood. When turned out in the clover lot they keep their blood cooled off, and they rarely suffer from cholera. We cannot afford to feed our stock with too highly concentrated food in winter unless we can give them daily exercise sufficient to counteract the effect of this and feed them also with roots, vegetables and other green things. If we do trouble will follow sooner or later, and then the mischief is done. It is much easier to upset the system of an animal than to correct it and bring it back to a state of good health. The danger confronting us now at this season is that of heavy feeding with not sufficient variety either of food or exercise. Neither can be neglected, and a good stock of roots is an excellent thing to begin the winter with for daily feeding.

WILLIAM CONWAY.

"THE BEST SPAVIN REMEDY THEY EVER USED."

Enclosed find check for \$1.50, in payment for one bottle GOMBAULT'S CURE FOR SPAVIN. The bottle ordered before has already been used, and with very good success indeed. Our countryman, who has had long experience with horses in Kentucky and New York, claims that it is the best spavin remedy he has ever used, and the results were most satisfactory.

J. REYMERHOFER, JR., Sec'y.

FARQUHAR
VARIABLE FRICTION FEED
SAW MILL
AND
ajax
CENTER CRANK
ENGINE
Rapid, accurate, strong and simple, with large capacity. Engines on stile or wheels. Strong and safe. No Farquhar Engine has ever exploded. Send for catalog of Portable Engines, Single Mills, Threshing Machines, Stationary Engines and Boilers, and Standard Agricultural Implements generally. A. B. FARQUHAR CO., Ltd., York, Pa.

BOOKS

Every Farmer and Farmer's Son SHOULD READ!

L. H. Bailey's Principles of Agriculture... 1.25
A. I. Root's A. B. C. of Bee Culture... 1.25
Henry Stewart's The Domestic Sheep... 1.50
Voorhees' Book on Fertilizers... 1.00
Practical Agriculture... .50

Any of the above valuable books will be sent postpaid upon receipt of price. Address:

THE PROGRESSIVE FARMER,

RALEIGH, N. C.

SEND NO MONEY
Until you have seen and tested our watch. We sell at Factory Price at One-Half and Less than what you have to pay elsewhere. Our watches are fitted with the unequalled, 17 Jeweled Special Limited, or 17 Jeweled Ballroom or Night Movement, known the world over as the best. Case is beautiful solid gold pattern engraving, extra 14 karat gold plate, good enough for a lifetime. Special Offer for the next 90 days: Send your address and we will send watch C. & D. with privilege of full examination. Call in any expert and if found perfectly satisfactory and the best watch ever offered for such a price pay \$5.75 and express charge \$2.00, otherwise return watch with \$7.00 cash for next 30 days with express charge \$2.00. State if Ladies or Gentleman watch is wanted. Write at once as we may not advertise this watch at the price again. Catalogue free. Excelsior Watch Co., 216 Central Bank Bldg., Chicago.

THE SAMSON Back Band Buckle



Holds with a Grip that Never Slips

No teeth to cut or wear the web. Nothing to break or wear out. Made of steel, strong, simple, easily adjusted and will not rub or chafe, as no part of the metal touches the cloth, and the under side of the band lies perfectly flat. If harness maker or dealer does not have it, write us for circular. Free.

THE STANLEY WORKS,

79 Chambers Street, New York, N. Y.

I Can Sell Your Farm
or country property no matter where located. Send description and selling price, and learn my successful plan. W. M. Ostrander, 1215 Filbert St., Phila., Pa.

FOR SALE
NICE ENGLISH BERKSHIRE PIGS.
Price Single Pig.....\$1.00
" Pair..... 7.50
Freight paid by me to parties in North Carolina.....
Also a fine lot of young Jersey Cows and Heifer Calves.....
J. M. HARRISON,
Mill Bridge, N. C.

HUNT'S CONSUMPTION

—AND— BRONCHITIS CURE.

Cures when all else fails. Write for testimonials which prove the truth of this statement. This wonderful remedy is prepared by Rev. George E. Hunt, Lexington, N. C. Price, 50¢ per bottle. For sale by all druggists.

200-Egg Incubator
for \$12.00
Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day.
GEO. H. STALL, Quincy, Ill.

FARMS

Bought, Sold and Lased.

TENANTS WANTED

Grimes Real Estate Co., WASHINGTON, N. C.

Really Now
Aren't 32 issues of such a Journal as THE PROGRESSIVE FARMER worth ONE DOLLAR of any man's money? : : : :

NO RATCHETS TO LCOPEN
If you use Page Colled Steel Spring Wire Fence. L. B. ROBERTSON, Receiver, PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

WE WANT AGENTS
At every postoffice in North Carolina, South Carolina, Virginia, Tennessee and other States to solicit subscriptions, privately or at public meetings, in season and out of season.

Work for Premiums or for Cash Commission. Agent must himself be a subscriber. If interested, write for terms. Address:

The Progressive Farmer,

RALEIGH, N. C.

NATIONAL FARMERS' ALLIANCE.

President—J. C. Wilborn, Old Point, S. C.

Vice-President—P. H. Rahilly, Lake City, Minn.

Secretary-Treasurer—A. B. Welch, Victor, N. Y.

LECTURERS.

J. P. Sossamon, Charlotte, N. C.

J. C. Hanley, St. Paul, Minn.

Star : Pea : Huller.

Guaranteed Capacity: [Bushels per hour.]

No. 1, 10 to 15.

No. 2, 20 to 40.

No. 3, 75 to 100.

---PRICES---

No. 1, \$25.00; : No. 2, \$35.00; : No. 3, \$125.00.

WRITE FOR CIRCULARS.....

SECOND-HAND BAGGING AND TIES

SEED OATS, 500 BUSHELS VIRGINIA WINTER OATS AT LEAS

THAN SEEDSMEN'S PRICES.....

T. B. PARKER, STATE BUSINESS AGENT,

HILLSBORO, N. C.



Every cotton planter should write for our valuable illustrated pamphlet, "Cotton Culture." It is sent free.

Send name and address to GERMAN KALI WORKS, 93 Nassau St., N. Y.

SEED POTATOES
Grown by us in Aroostook Co. Maine. Purity Guaranteed. H. W. J. ELLIS & CO., 310 Washington St., New York.

JULY 1st WE CUT
prices, and bettered the quality of Page Fence. Write for New Price List, or see our ad. PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Finding our readers who have purchased copies so enthusiastic in praise, and that there are yet hundreds anxious to secure copies, we have again made arrangements for handling for a few weeks longer the world-famous book—

"In His Steps;—OR—

What Would Jesus Do?"

BY CHARLES M. SHELTON, THE RELIGIOUS MASTERPIECE OF THE CENTURY.

The October Ladies' Home Journal reports that

SIX MILLION COPIES

of this "phenomenally successful" book have been sold.

In this wonderful book, Rev. Chas. M. Sheldon tells the story of men in every walk of life who pledge themselves for a time to bring the stern test question, "What Would Jesus Do?" to bear upon each act of every day life.

In order that no one shall fail to read this book on account of price, we have arranged a special edition and make the following exceptionally liberal offers.

READ THESE OFFERS!

To any paid-up subscriber, or to any person sending us \$1 on his subscription, we will send a copy of this great work for only

.....TEN CENTS EXTRA

WHY NOT GET A COPY FREE!

To any person sending us 50¢ in new subscriptions, or \$1 in renewals (not one's own), we will send a copy of this work

.....FREE OF CHARGE

Order to-day. Address:

THE PROGRESSIVE FARMER

RALEIGH, N. C.

PATENTS

TRADE MARKS & CO. PATENTS

Any person sending a sketch and description of an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents. Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, \$3 a year; four months, \$1. Sold by all newsdealers.

MUNN & CO. 361 Broadway, New York

Branch Office, 625 F St., Washington, D. C.